FPD # 13016

Instructions for Types BF and BFD Control Relays And Accessories

I.L. 13016A

THE BF RELAY FAMILY

Type BF (AC) and Type BFD (DC) control relays, their latch attachments, and solid-state timers can all be mounted on a BFMS7 mounting strip without the need for additional hardware.

This industrial type control is designed to be installed, operated, and maintained by adequately trained workmen. These instructions do not cover all details, variations, or combinations of the equipment, its storage, delivery, installation, check-out, safe operation, or maintenance. Care must be exercised to comply with local, state, and national regulations, as well as safety practices, for this class of equipment.

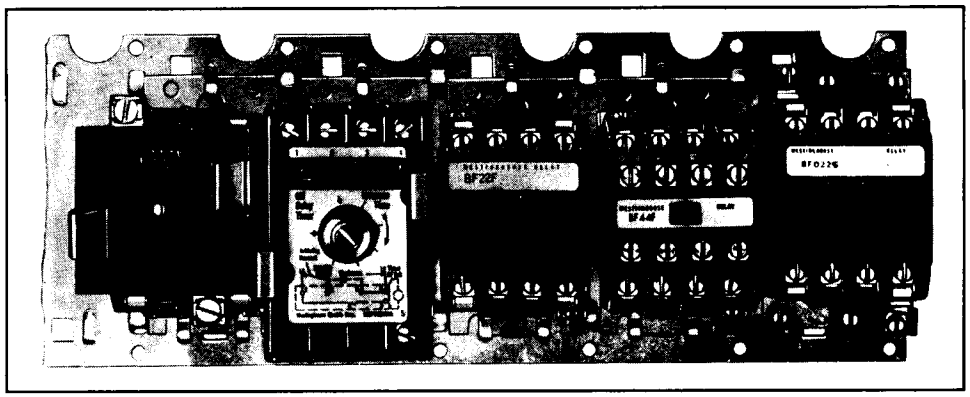


Fig. 1 BF Relays on Mounting Strip

AC COIL REPLACEMENT

With replacement coil at hand, remove the relay from the panel or mounting strip. Remove the two screws that are now accessible from the back side of the relay baseplate. Be alert to capture the two coil springs that are positioned between the coil and the armature carrier. Remove the old coil and replace with a new coil. Reassemble the relay with the ends of the two coil springs confined in their respective cavities.

DC COIL REPLACEMENT

With replacement coil at hand remove the old coil leads to the coil terminals. Remove the two screws that mount the two insulated coil terminal supports and the other two screws that attach the top plate to the magnet yoke. Remove the top plate with the contact housing attached. Remove the old coil and replace with a new coil. Reassemble the relay. Coil operates with either polarity.

COIL DATA (Varies with Contact Arrangement)

- Pickup Time: 25-40 milliseconds DC; 11-18 milliseconds AC
- Dropout Time: 15-25 milliseconds DC; 11-18 milliseconds AC
- Coil Power (DC): 12 Watts, 250 Volts Max.
- Coil Power (AC): 72 VA Open, 12 VA Closed

BF RELAY ELECTRICAL RATINGS

AC RATING – NEMA A300

Volts AC	Maximum Current			Maximum VA	
	Cont.	Make	Break	Make	Break
120	10	60	6	7200	720
240	10	30	3	7200	720

Hp Ratings (UL Recognized)

Phase	AC Volts	
	115	230
1 (2 poles)	1/6	1/2
3 (3 poles)	. .	1

DC RATING – NEMA P300

Volts DC	Maximum Current			Maximum Make or Break VA
	Cont.	Make	Break	
125	5.0	1.1	1.1	138
250	5.0	0.55	0.55	138

Resistive Rating
125V DC: 3 amps 250V DC: 1.5 amps

TABLE I – RENEWAL PARTS

Contacts are not replaceable.

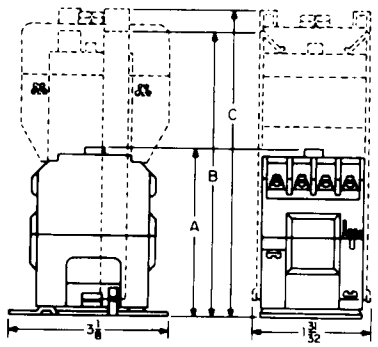
BF Relay Replacement Coils

Volts	Hz	Part Number
12	60	178C603G06
24	60	178C603G15
48	60	178C603G05
110	60	178C603G54
208	60	178C603G17
120/110	60/50	178C603G01
240/220	60/50	178C603G02
277	60	178C603G26
480	60	178C603G07

BFD Relay Replacement Coils

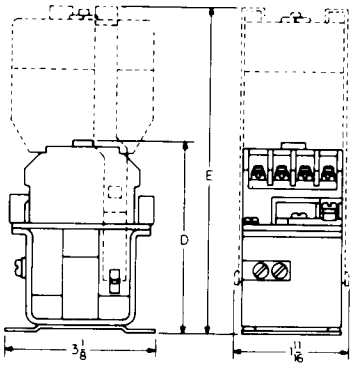
Volts	Part Number
6V-DC	1259C71G12
12V-DC	1259C71G06
24V-DC	1259C71G07
48V-DC	1259C71G04
120V-DC	1259C71G02
240V-DC	1259C71G01

BF Relay With Permanent Magnet Latch and Solid-State Timer



No. of Poles	Dimension A BF Only	Dimension B BF With Latch
4	3 7/32	6 7/32
8	4 3/16	7 3/16
12	4 13/16	7 13/16

BFD Relay With Solid-State Timer



Dimension C BF With Timer	Dimension D BFD Only	Dimension E BFD With Timer
5 7/8	4 1/32	7 1/16
6 7/8	4 31/32	8
7 1/2	5 5/8	8 21/32

BF Mounting Strip Dimensions, Inches

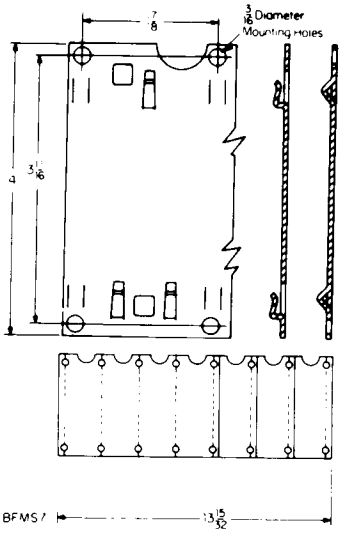


Fig. 2 Outline and Dimension Drawings (dimensions in inches)

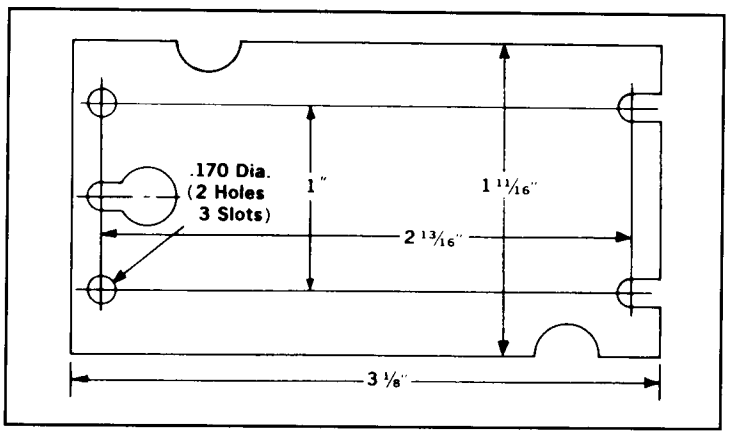


Fig. 3 BF Relay Baseplate

ACCESSORIES

Solid-state timers and magnetic latch attachments are available for direct mounting on Type BF and Type BFD relays. See Table II. BSTD solid-state timers can switch at 24, 48 or 120 VDC.

TABLE II

Type BST, BSTD Solid-State Timers
On Delay

Voltage	Time Delay Range	Catalog Number ①
120 AC	.1 to 30 seconds	BST-ON
120 AC	30 to 60 seconds	BST-ONB
DC	.1 to 30 seconds	BSTD-ON

Off Delay

Voltage	Time Delay Range	Catalog Number ①
120 AC	.1 to 30 seconds	BST-OF
120 AC	30 to 60 seconds	BST-OFB
DC	.1 to 30 seconds	BSTD-OF

① For panel mount version, add Suffix **P** to catalog number.

Type BFML Permanent Magnet Latch
For AC Relays

Coil Volts	Coil Hz	Catalog Number
24	60	BFMLI
48	60	BFMLJ
120/110	60/50	BFMLF
240/220	60/50	BFMLG

For DC Relays

Coil Volts	Catalog Number
24	BFMLL
48	BFMLM
120	BFMLS
240	BFMLT

Mounting Strip for BF and BFD

No. of Relays	Catalog Number
7	BFMS7

Place device so that steel hooks engage bottom of relay base plate.

Insert screwdriver in square opening on mounting strip above the relay.

A twist of the screwdriver forces the device into place. To remove device, insert screwdriver below the relay and reverse the procedure.

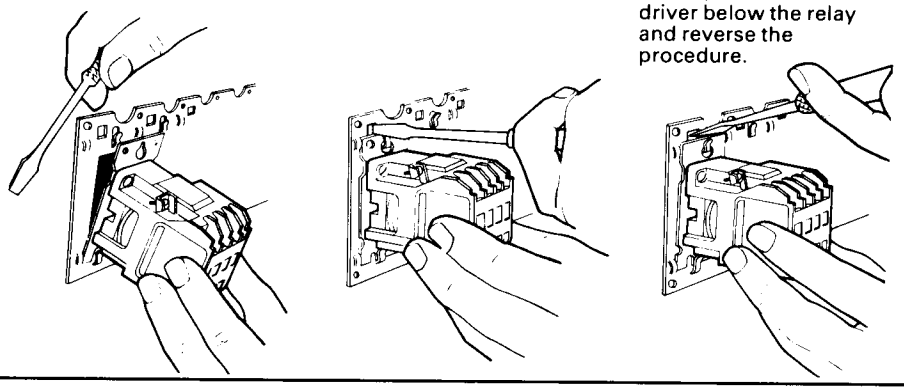


Fig. 4 Installation of BF Relay on Mounting Strip

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